

NATURAL RESOURCES CONSERVATION SERVICE CONSERVATION PRACTICE STANDARD

ROCK BARRIER, (FEET)

Code 555

DEFINITION

A rock retaining wall constructed across the slope to form and support a bench terrace that will control the flow of water and check erosion on sloping land.

PURPOSE

Stabilize steeply sloping land so that it can be farmed with a minimum of soil loss.

CONDITIONS WHERE PRACTICE APPLIES

Rock barriers are applicable to land suitable for cultivation where soil depth is adequate for benching and where the effectiveness of less intensive measures for soil and water conservation would be questionable. This standard applies to all rock barriers 6 feet or less in height on land slopes as much as 70 percent. Suitable natural outlets or satisfactory sites for constructing outlets must be available.

CRITERIA

Grade. The top of the rock barrier may be level or have a grade toward the outlet. Maximum grade shall be 0.5 percent.

Cross Slope. The bench between barriers shall have a negative slope from the top of one barrier to the toe of the upslope barrier. Cross slopes shall have a grade of 1.0 to 3.0 percent.

Surface Drain. Surface drainage shall be provided by a longitudinal ditch not less than 0.5 ft² in area along the toe of the upslope barrier.

Height. The height of the rock barrier shall not exceed 6 feet.

Base Width. The minimum base width shall be 18 inches, plus 1.5 inches for each 0.5 feet of height in excess of 2.5 feet. The exposed face of the barrier shall have a batter of 3 inches/foot of height.

Vertical Interval. Vertical interval between adjacent benches shall not exceed 5 feet.

Horizontal Interval. The minimum horizontal distance between barriers shall be 5 feet.

CONSIDERATIONS

Consider the depth of cut or excavation levels, and the resulting available plant rooting depths.

Consider other measures needed for adequate management of storm runoff.

Consider the excavation and fill material necessary for balancing cuts and fills.

Consider the effects of erosion and the movement of sediment, pathogens, and soluble and sediment-attached substances carried by runoff.

Consider the effects ground disturbance may have on cultural resources.

PLANS AND SPECIFICATIONS

Plans and specifications for constructing rock barriers shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve its intended purpose.

OPERATION AND MAINTENANCE

An operation and maintenance plan shall be prepared for the operator.

Items to be addressed in the operation and maintenance plan are:

1. Provide periodic inspections, especially immediately following runoff events.
2. Promptly repair or replace damaged components as necessary.
3. Remove sediment that has accumulated in surface drain and outlet to maintain designed capacity.
4. Vegetation in the outlet, damaged by livestock, machinery, or erosion must be repaired promptly.
5. Vegetation, where specified, shall be maintained. Trees, brush, and undesirable vegetation shall be controlled by chemical or mechanical means following federal, state, and local regulations.
6. Keep machinery away from steep slope rock barriers. Keep equipment operators informed of all potential hazards.